TECHNICAL DATA SHEET

Acrylonitrile Butadiene Styrene with GP500 graphene, 1 wt.%

GrapheneTech offers a thermoplastic with graphene targeted at industrial applications. This Acrylonitrile Butadiene Styrene (ABS) is manufactured using melt compounding process, getting a uniform distribution of Graphene [1% w/w] and ensuring well bonded and dispersed graphene in polymer matrix. This composite could be used to produce final pieces or as an additive to improve the general properties of the products based on ABS or to incorporate it in mixtures of different polymers.

**Product Technical Specifications**

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Black Granules</th>
<th>Heavy Metals</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melt Temperature</td>
<td>130 °C</td>
<td>Heat Stability</td>
<td>270 °C</td>
</tr>
<tr>
<td>Density</td>
<td>1,059 g/cm³</td>
<td>Melt Flow Index</td>
<td>5,71g/10min (220 °C/10kg)</td>
</tr>
<tr>
<td>% Solids</td>
<td>100%</td>
<td>Light Fastness (level)</td>
<td>8</td>
</tr>
</tbody>
</table>

*Light Fastness: (8 = best, 1 = worst)*

Main Application: Extrusion, Blow molding and Injection molding

**Recommended Usage**

Typical use levels are <1% depending on final application, specific processing conditions, and desired effects. The optimum loading level for each particular end use will be selected by processors.

**Characteristics**

With a 1%w/w of GP500 graphene in the final polymer composition it is achieved:

- Similar tensile strength
- An increase of 871% in elongation to break
- A decrease of 51% in Young’s modulus
- An increase of 1,4ºC in HDT (Heat Deflection Temperature)
Properties of GP500 graphene polypropylene matrices

**Storage and Handling**

This product should be stored in a closed container at room temperature and in clean and stable environment. The responsibility of the storage in unsuitable conditions or their contamination would not be assumed by GrapheneTech.

**Health and Safety**

For safe use of this product, please review datasheet (MSDS) of product.